

AFI (Dw)



Docket No.: 1293.1857

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Application of:

Jong-hoon LEE, et al.

Serial No. 10/645,868

Group Art Unit: 2627

Confirmation No. 8642

Filed: August 22, 2003

Examiner: Christopher Ray Lamb

FOR: METHOD OF CONTROLLING RECORDING OPERATION FOR OPTICAL DISC  
RECORDING APPARATUS

**REPLY BRIEF**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Examiner's Answer mailed November 24, 2009 in the above-  
identified application, Applicants submit this Reply Brief.

**I. First Claim Feature**

By way of review, this feature (using claim 1 as an example) is comparing the length of the defect with first and second times "determined according to a recording speed of the optical disc."

At pages 10 and 11 of the Examiner's Answer, the Examiner addresses what is referred to as the Appellants' "first point." The Examiner's position is that one of ordinary skill in the art would understand that the times T1 and T2 of Takasago depend on the recording speed. As support of this position, the Examiner refers to column 7, lines 10-20 of Takasago. However, this portion merely refers to "the difference or unevenness in characteristics among optical disc apparatuses." It is noted that the reference does not teach that these different characteristics include recording speed.

In fact, the "Background of the Invention" portion of Takasago refers to the "characteristics among optical disc apparatuses." However, this discussion does not appear to relate to recording speeds, but instead, the paths followed by light spots of the different apparatuses. Specifically:

in an optical disc apparatus, the light spot may pass the defect without digressing from the track, though the off-track is detected at the defect. The same optical disc as used in the above disc apparatus can be loaded in another optical disc apparatus, however a light spot may digress from the track at the defect.

Takasago, col. 2, ln. 1-7.

Furthermore, Takasago lists other characteristics as unevenness or variations in bandwidth of a servo system, variations in output signal of a detector and variations in the driving force of galvano-mirror. Takasago, col. 3, ln. 52-59.

Thus, by "different or unevenness", the reference appears to be referring to the path of the light spot, and other variations, not the recording speed. Accordingly, one of ordinary skill in the art would not have concluded that Takasago teaches consideration of recording speed, as asserted by the Examiner.

At page 11 of the Examiner's Answer, the Examiner addresses what is referred to as the Appellants' "second argument." The Examiner asserts that it is within routine skill in the art to adjust the recording speeds of drives. However, the Examiner has not produced any references that support the position that adjusting the recording speed of drives would involve determining lengths of defects, as claimed.

Appellants further note that the claimed feature is not adjusting the recording speeds of drives. Instead, the feature is determining lengths of defects (see item II below).

## **II. Second Claim Feature**

By way of review, this feature is "determining a type of the defect based on the length of the defect." Appellants have previously argued that Takasago classifies defects according to a duration of the off-track signal.

At page 12 of the Examiner's Answer, the Examiner asserts that "appellant's own invention measures the defect length the same way that Takasago does: by comparing the tracking error signal to a time." However, there is no teaching regarding the claimed "length" of the defect in Takasago. Instead, this reference relies upon time, particularly, time of the off-track signal.

It appears that the Examiner takes the *length* of the defect to be the same as the *duration* of the off track signal. However, these two items are not necessarily equivalent. This is because a defect does not always cause an off track signal. For example, a defect may occur due to an abnormal generation of a wobble signal or a focusing error signal. Also, a defect may occur due to a change in writing power.

Along these lines, it is also noted that in Takasago, the off-track signal is generated using the tracking error signal. As background information, it is noted that the present invention may generate the defect signal using an RF signal reproduced during the writing operation. According to this RF operation, an off-track does not always occur when there is abnormal generation of the RF signal reproduced during the writing operation.

## **III. Combination of References**

At pages 12 and 13 of the Examiner's Answer, the Examiner addresses the Appellants' previous arguments that the combination is not proper. The essence of the Appellants' previous arguments was that no *motivation* was provided to combine Kishimoto with the remaining references. However, it appears that the Examiner begins by addressing whether the references teach all of the claimed features, particularly, whether Takasago or Kishimoto teaches a variable speed. This is particularly evidenced at page 13, lines 5-6 of the Examiner's Answer, which states that "the combination would still meet the claim language."

However, the Appellants arguments (at least with respect to the combination) are not directed to whether all of the claim features are taught. Instead, Appellants submit that one of

ordinary skill in the art would not have been motivated to combine Kishimoto with the remaining references. The alleged motivation is to record at a higher or more appropriate speed. Office Action of October 30, 2008, lines 6-7. Appellants' submit that this result would not have provided any motivation.

Appellants note with appreciation the new motivation provided by the Examiner in the last paragraph of page 13 of the Examiner's Answer.

Takasago uses a single speed, and Kishimoto teaches a plurality of rotation speeds (writing and reproduction speeds). Thus, the different speeds of Kishimoto are for *different* operations. In contrast, claim 1 recites determining according to a recording speed, so the different speeds are for a same operation. Thus, even assuming for the sake of argument that the Examiner has provided proper motivation, the combination of Kishimoto and Takasago would still not have resulted in different speeds for a recording operation.

#### IV. Summary

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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Jan. 25, 2010

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